

# **LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES**



**OFFICE OF FISHERIES  
INLAND FISH SECTION**

**PART VI-A**

**WATERBODY MANAGEMENT PLAN SERIES**

**KEPLER LAKE**

**LAKE HISTORY & MANAGEMENT ISSUES**

# **CHRONOLOGY**

DOCUMENT SCHEDULED TO BE UPDATED EVERY THREE YEARS

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## Lake History

### GENERAL INFORMATION

Parish / Location:

Bienville

Date Lake Formed:

Impounded 1,841 acres in 1957; however, the lake level was raised 1.5' in 1959 and the total area was increased to 1,925 acres.

Ownership:

The water bottoms are privately owned. Flood easements were obtained prior to construction of the dam. The Louisiana Department of Wildlife & Fisheries (LDWF) manages the fish and wildlife resources.

Size (surface area):

1,925 acres

Watershed:

46 square miles (29,433 acres) drain into Kepler Lake. The ratio of watershed to lake surface is 15.3:1.

Watershed characteristics: Plantation pine, mixed hardwoods, and pastures. Soil is sandy, light clay, and relatively infertile. Soil alkalinity and pH are low.

Pool Stage:

Surface elevation of Kepler Lake is set at the spillway elevation of 176.5 MSL (mean sea level).

Spillway Width:

Concrete weir wall spillway, 100 feet wide (Figure 1).



Figure 1. Spillway at Kepler Lake during drawdown conditions.

Drawdown (outlet) structure description:

The outlet structure is a 5' x 5' steel sluice gate situated at mid-length near the bottom of the spillway wall. There is a diffusion block located downstream of the gate to divert the discharge to the sides of the spillway (Figure 2). The discharge rate through the 5' x 5' sluice gate is reported to be approximately 532 cu. ft. per second according to personal communication from Louisiana Department of Transportation and Development (LDOTD) Engineer Harvey Christian. Mr. Christian reports that opening this gate 35 inches will dewater the lake approximately 4 inches per day. Completely opening the gate will dewater the lake approximately 7 inches per day.



Figure 2. Water striking the diffusion block on the downstream side of spillway at Kepler Lake during a drawdown.

Who Controls:

The LDOTD is responsible for operation and maintenance of the dam and water control structure on Kepler Lake. The Kepler Creek Recreation and Water Conservation District Commission (KCRWDC) has control over the supply of fresh water of Kepler Creek. Any request for opening the control structure must be directed to the Secretary of DOTD in writing from the Secretary of the Department of Wildlife and Fisheries or his designee.

## **LAKE AUTHORITY**

Association:

Kepler Creek Recreation and Water Conservation District Commission

Authorization:

Created in 1995 by R.S. 38:3087.31 through 38:3087.47 as a political subdivision of the state of Louisiana. See [Appendix I](#).

Kepler Creek Recreation and Water Conservation District Commission

Michael Davis—President/ Term Expires 01/01/17  
318-245-6426 / [mdavis6426@gmail.com](mailto:mdavis6426@gmail.com)

Jeff Austin—Term Expires 01/01/20  
318-294-9187

Thomas Swint Sr.—Term Expires 01/01/20  
318-505-9395

Gary Bennett—Term Expires 01/01/17  
318-470-9103

David Stroud—Term Expires 01/01/20  
318-245-2205

**ACCESS**

Boat Ramps:

There are three public access boat launching facilities available for use at Kepler Lake (Figure 3). Their names, physical descriptions and geo-referenced locations are found in Table 1 below:

Table 1. – Kepler Public Boat Ramps

<b>Ramp</b>	<b>Coordinates NAD 83 (decimal degrees)</b>	<b>Ramp</b>	<b>Parking</b>
JJ's/Murphy Camp (Pay to launch)	N 32.343389 W -93.13470	Concrete	Gravel – 5 Trailers
Public Ramp at Kepler Dam (Public)	N 32.31569 W -93.15198	Concrete	Gravel – 20 Trailers
Kepler Landing (Pay to launch)	N 32.31997 W -93.15300	Concrete	Gravel – 10 Trailers

See [Appendix II](#) - “Kepler Public Boat Ramps” for mapped locations of ramps.





Figure 3. Public boat launch facility at Kepler Lake, LA located near the spillway.

Piers:

There are no public piers located on the lake.

State / Federal Facilities:

None

Artificial Reefs:

None

## **SHORELINE DEVELOPMENT**

The southern shoreline of the lake is bordered by woodlands consisting primarily of pine plantations interspersed with mixed hardwoods around the mouth of Kepler Creek and smaller tributary creeks. The northern shoreline of the lake is fairly well developed with modest homes and camps (Figure 4).



Figure 4. Development along the northern shoreline of Kepler Lake consists primarily of modest homes and camps.

## **PHYSICAL DESCRIPTION OF LAKE**

### Shoreline Length:

21.1 Miles

### Timber Type:

Prior to impoundment, the bottom of Kepler Lake consisted of a mixed pine – deciduous forest with bottomland hardwoods along the creek channel. Some of the marketable timber was sold by landowners prior to inundation. No attempt was made to remove dense brush and timber which had little or no market value. The dead trees and brush constituted a major problem greatly impeding navigation by boat in the early years of Kepler Lake. The remaining stumps persist to this day and still pose a hazard to navigation in most areas of the lake.

### Average Depth:

8.72 feet

Maximum Depth:

16 Feet

Total Water Volume at Pool Stage:

16,786 acre feet

Natural Seasonal Water Fluctuation:

2-3 feet

## **EVENTS/ PROBLEMS**

Navigation Hazards / Channel Marking

According to the undated “Proposed Management Plan for Kepler Lake, Bienville Parish, Louisiana” prepared by Lloyd Posey, Lake Management Project Biologist for LDWF; navigation hazards were present in Kepler Lake upon inundation of the lake bed. Most likely prepared during the early 1960’s, this management plan can be found in [Appendix III](#). After impoundment, much of the remaining timber and brush, except for the water tolerant species, died and fell over creating major problems for navigation by boat.

The remaining stumps in the lake still constitute a navigation hazard (Figure 5). The KCRWCDC have marked the channel with PVC pipe on several occasions. The creek channel remains difficult to navigate as it meanders over the lake bed and the makeshift channel marking system is difficult to follow.

During the 2014 drawdown of Kepler Lake, LDWF personnel used GPS equipment to identify the creek channel and the previously cleared boat lanes that exist below the bridge. This information was used to help design a plan for marking the navigation channels using United States Coast Guard approved markers and materials. The proposed project would include the main creek channel as well as a man-made channel that runs along the northern side of the lake and two small lanes that connect the two. However, the KCRWCDC currently lacks sufficient funding to clear, adequately mark, and maintain boat lanes on the lake.



Figure 5. Kepler Lake has many areas where stumps are hazardous to navigation; these stumps which have been exposed by a drawdown are normally near the surface of the water.

#### Water Clarity – Lack of Fertility

The “Proposed Management Plan for Kepler Lake, Bienville Parish, Louisiana”, indicates that the watershed of Kepler Lake is comprised largely of relatively infertile sandy and light clay soils. Springs are abundant in the drainage and the water is pure and lacks dissolved minerals. The clear water combined with the large expanses of shallow flats has compounded the aquatic vegetation problems over the years. The low fertility of the watershed contributes to the low fisheries production from the reservoir. Historic water quality data was obtained from the USGS Water Resources website; Water Quality Samples for Louisiana, <http://nwis.waterdata.usgs.gov/la/nwis/qwdata>. Samples collected from 1959 to 1974 indicate nitrate levels ranged from 0.045 mg/L to 0.36 mg/L; potassium levels from samples collected during 1959 and 1960 ranged from 1.00 mg/L to 1.90 mg/L. Analysis for phosphorus and orthophosphate from samples collected during 1974 indicate levels less than 0.010 mg/L as P for 8 of the 9 samples and a level of .030 mg/L as P for one of the samples. Hardness ranged from 6 mg/L as  $\text{CaCO}_3$  to 20 mg/L as  $\text{Ca CO}_3$  for samples collected during the period 1959 to 1974. This information confirms that low fertility has been a problem even in the early years of Kepler Lake. Parameters measured during recent water quality sampling in conjunction with standardized sampling include conductivity, pH, temperature, and dissolved oxygen. Information from these samples alone is not conclusive that the fertility is low in Kepler Lake. Secchi depth visibility is a

good indicator of water clarity and low fertility and a secchi depth of 84 inches was recorded in November of 2010 on Kepler Lake.

#### Lack of Threadfin Shad Forage Base

One area of concern with the fisheries resources in Kepler Lake is the lack of an adequate forage base. Threadfin shad have been stocked on two occasions with 50,000 being stocked in 1998 and an additional 30,000 stocked in 2009. Despite anecdotal information from local anglers, LDWF has not documented any reproduction of threadfin shad from the reservoir. Establishment of this species would be beneficial in providing largemouth bass an additional forage species in open water habitats of the lake and likely increase growth rates of largemouth bass from the reservoir. Low water fertility and excessive aquatic vegetation may be responsible for the lack of threadfin shad survival. LDWF biological staff did collect a few small gizzard shad during the fall of 2015 near the bridge on Kepler Lake. This was the first documented occurrence of young-of-the-year (YOY) shad of either species. The presence of YOY gizzard shad may indicate conditions are more favorable for shad to survive now and may warrant additional shad stockings.

## **MANAGEMENT ISSUES**

### **AQUATIC VEGETATION**

Kepler Lake has historically had problems with nuisance submerged and emergent aquatic vegetation. This is problematic to shoreline property owners due in part to large expanses of shallow water found near the inhabited shoreline. Additionally, high water clarity compounds the problem of submerged aquatics, allowing the vegetation to grow at greater depths. In 1962, only 5 years after impoundment, aquatic vegetation had increased to the point of impacting navigation and fishing. The primary problematic plants were submerged species such as parrot feather (*Myriophyllum aquaticum*) and bladderwort (*Utricularia* spp.), along with emergent vegetation such as pondweeds (*Potamogeton* spp.), water shield (*Brasenia schreberi*) and fragrant water lily (*Nymphaea odorata*). In response to the aquatic vegetation problems, LDWF biologists recommended an annual water level fluctuation program consisting of dewatering the lake seven feet beginning shortly after July 4 and closing the gates to allow the lake to refill on October 25 of each year. It is not known whether this plan was ever implemented.

A five foot drawdown for unknown reasons occurred between September 13, 1967 and December 1, 1967. The lake was lowered eight feet beginning July 9, 1969 for repairs to the dam and spillway. Drawdowns occurred again in the summer of 1974 and in 1975 at the request of the lake commission. Despite these drawdowns a severe infestation of submerged vegetation was noted in 1976 that consisted primarily of Brazilian elodea

(*Egeria densa*), combined with fanwort (*Cabomba caroliniana*), bladderwort (*Utricularia* spp.) and muskgrass (*Chara* spp.). In response to the vegetation problem on the lake a 10' drawdown was recommended by LDWF biologists.

A drawdown for vegetation control was conducted in the fall of 1978 through January 1, 1979. In type map surveys conducted during the summer of 1980, dense mats of Brazilian elodea (*Egeria densa*) were found extending into nine feet of water and covering approximately 50% of the lake. Again, LDWF made a recommendation and a conducted a drawdown beginning August 1, 1980 through January 1, 1981 to a depth of nine feet below normal pool. The type map survey conducted during the summer of 1981 revealed some reduction in vegetation coverage following the drawdown, but coverage in the upper end remained severe, and in the remaining areas of the lake light to moderate coverage was noted out to approximately the five foot contour. A type map survey of aquatic vegetation conducted in the summer of 1982 indicated a severe infestation in the extreme upper end of the lake primarily consisting of fanwort (*Cabomba caroliniana*) and bladderwort (*Utricularia* spp.), along with some coontail (*Ceratophyllum demersum*). Moderate to light coverage of a mixture of submerged aquatic vegetation consisting primarily of bladderwort (*Utricularia* spp.) and muskgrass (*Chara* spp.) was found in a fringe along the shoreline in the rest of the lake.

In August of 1982, the Bienville Parish Police Jury passed a resolution requesting that LDWF consider using grass carp to control the recurring submerged aquatic vegetation problem in Kepler Lake. Due to a policy that precluded introducing grass carp into Louisiana waters and concerns about impacts to aquatic ecosystems, LDWF did not recommend the use of grass carp in Kepler Lake at that time.

Another drawdown of unknown duration and magnitude occurred after Labor Day in 1982 when the gates were opened prior to LDWF consent. A type map survey conducted by personnel from the Aquatic Vegetation Section during 1983 revealed approximately 20% coverage of submerged aquatic vegetation which was no significant change in vegetation coverage from the previous year. It is noteworthy that milfoil (*Myriophyllum* spp.) was documented during this survey. However, in October of 1983, the District 1 Fisheries Biologist reported dense submerged vegetation consisting mostly of Brazilian elodea (*Egeria densa*) was found to be extending to water depths of eight feet in all areas of the lake. A slight decrease in aquatic vegetation coverage from the previous year was noted in the type map survey conducted during the summer of 1984. It was reported that all areas of the lake with the exception of the extreme upper end were accessible to fishermen and boaters.

A request was made by the Bienville Parish Police Jury for a six foot drawdown beginning after Labor Day 1986 and extending to January 1, 1987. Correspondence from LDWF indicates no significant benefits to the vegetation would likely be obtained as there had been very little change in aquatic vegetation coverage over the past three years and in fact, a slight decrease in coverage had been observed, but had no opposition to a drawdown for shoreline maintenance. The lake was again dewatered in 1990 through

February of 1991 at the request of the Bienville Parish Police Jury to replace the bridge on the lake.

Kepler Lake underwent drawdowns primarily for shoreline maintenance and erosion control, with secondary benefits of vegetation control, at the request of the KCRWCDC in 1994, 1997, 2003, 2006, and 2014 (See Table 3 for more details).

The bottom topography of Kepler Lake is a major factor in the ongoing problem of submerged aquatic vegetation in the lake and the emergent vegetation extending far from the inhabited shoreline. The gradual sloping shoreline and high water clarity provide optimum growing conditions for nuisance aquatic vegetation. The lake has a long history of frequent drawdowns which have not proven successful in providing long term control of nuisance aquatic vegetation. Only six months after the 2006-2007 drawdown, an aerial survey revealed that there was approximately 25% coverage of submerged vegetation in the reservoir (Figure 6). The majority of the vegetation was located above the bridge on the upper end of the lake. In addition to the approximately 500 acres of submerged aquatic vegetation observed during this survey, a fringe of emergent vegetation was noted along most of the shoreline of the lake and extended well out from the shoreline on the upper end of the lake. Observations made during a fish kill investigation in the summer of 2008 revealed that approximately 50% of the area above the bridge, or 400 acres, was covered in submerged and emergent vegetation, primarily consisting of coontail (*Ceratophyllum demersum*), fanwort (*Cabomba caroliniana*), bladderwort (*Utricularia* spp.), naiad (*Najas* spp.), alligator weed (*Alternanthera philoxeroides*), American lotus (*Nelumbo lutea*), and water lily (*Nymphaea* spp.).





Figure 6. Aerial view of Kepler Lake depicting aquatic vegetation on the upper end of the lake following the drawdown in 2006.

This same pattern of rapid re-growth of the submerged and emergent vegetation has been repeated in many previous drawdowns. Despite the complete drawdown capability that the control structure on Kepler Creek Lake offers, it is apparent that drawdowns alone, which often provide several years of vegetation control on other lakes, do not offer solutions for long term vegetation control on this reservoir.

Generally, 15% - 30% coverage of submersed aquatic vegetation is considered optimum for fisheries production. Vegetation coverage at these levels has proven unacceptable to the Kepler Creek Recreation and Water Conservation District Commission (KCRWCDC) and user groups of the lake. Frequent requests for drawdowns are evidence to that statement. At coverage levels of 15% to 30% of submersed aquatic vegetation, access is impeded for nearly all the shoreline property owners and recreational use of the lake is also affected. In order to maintain access to the inhabited shoreline areas submerged aquatic vegetation coverage would need to be in the range of 5% to 10%, provided the vegetation is distributed throughout the littoral area of the lake. Emergent vegetation has historically been and continues to be a problem near the inhabited and developed shoreline areas of the lake. Foliar herbicide applications can be effective in controlling the emergent vegetation so shoreline property owners can access their homes and camps.



The KCRWCDC recognized that the frequent drawdowns of Kepler Lake have not provided long term control of the submerged vegetation in the reservoir and have sought alternative control methods for the weed problems. The KCRWCDC sent a request to the LDWF Secretary dated September 16, 2008 requesting permission to stock triploid grass carp (TGC) in Kepler Lake and passed a resolution to that effect. A public meeting was held on January 26, 2009 at the Bienville Parish Police Jury meeting room in Arcadia, LA, where the public was allowed to comment on the proposed stocking of approximately 2,000 TGC in Kepler Lake. Personnel from LDWF provided information relative to impacts of TGC on the aquatic habitats prior to public comment on the issue. The risks of these fish escaping over the spillway was understood and accepted by the lake commission, as it is impractical to screen the spillway to contain the fish. The people in attendance were overwhelmingly in favor of stocking TGC for vegetation control. The Bienville Parish Police Jury unanimously passed a resolution in favor of stocking TGC in Kepler Lake for aquatic vegetation control at their regular meeting on February 11, 2009. On April 3, 2009, the KCRWCDC purchased and stocked 2,000 TGC that ranged from 8 to 10 inches in total length. LDWF stocked an additional 1,500 carp in late 2013, as vegetation continued to be problematic.

Giant salvinia (*Salvinia molesta*) was found and documented on Kepler Lake in March of 2009. LDWF Inland Fisheries Biologists found tertiary stage giant salvinia on the lower end of the reservoir. Control efforts are ongoing by LDWF spray crews using foliar applications of glyphosate and diquat. Subfreezing temperatures during the winters of 2010 and 2011 were instrumental in reducing the amount of giant salvinia present in the lake.

A vegetation assessment was performed on March 25, 2011. Variable-leaf milfoil (*Myriophyllum heterophyllum*), bladderwort (*Utricularia* spp.), and fanwort (*Cabomba caroliniana*) were still found to be at problematic levels during this survey. Approximately 500 acres of submerged vegetation was present at the time of the assessment. The submerged aquatic vegetation was not topped out at that time. The majority of the vegetation was located on the upper end of the reservoir. Water shield (*Brasenia schreberi*), fragrant water lily (*Nymphaea odorata*), water primrose (*Ludwigia octovalvis*) and American lotus (*Nelumbo lutea*) was found along the shoreline areas of the lake. At the time of the survey, coverage was not preventing access for shoreline property owners. Total coverage of emergent aquatic vegetation was approximately 60 acres, most of which was on the upper end of the lake. Giant salvinia (*Salvinia molesta*) was not noted during the survey but was likely present in very low quantities following the freezing temperatures over the winter.

Since 2011, salvinia control has been achieved through frequent foliar herbicide applications. Wind and wave action combined with the relatively infertile water have helped contribute to the low levels of salvinia as well.

Prior to the 2014 drawdown, aquatic vegetation continued to persist on Kepler Lake. Approximately 720 acres of submerged aquatic vegetation was found growing throughout

the portion of the lake above the Parish Rd. 676 Bridge. The vegetation was comprised of variable leaf milfoil, Eurasian milfoil (*Myriophyllum spicatum*), fanwort, and bladderwort. Milfoil comprised 70% of the total, and the other species listed filled in the remaining 30%. Coverage of aquatic vegetation below the bridge was less dense. Approximately 400 acres of submerged vegetation was found out to the eight foot contour line, consisting of bladderwort, fanwort, hydrilla (*Hydrilla verticillata*), elodea (*Elodea Canadensis*), southern naiad (*Najas guadalupensis*) and Eurasian milfoil.

Following the most recent drawdown in 2014, submerged aquatic vegetation has been slower to return than in past years. A vegetation survey conducted in August 2015 showed a 40 % reduction in overall aquatic vegetation with the greatest impact on submerged vegetation. Perhaps the combination of drawdown and grass carp may prove more effective at providing control for submerged aquatic vegetation on Kepler Lake than past attempts with only one method.

Vegetation was only problematic in the extreme upper end of the lake. Submersed aquatic vegetation was present out to the 7 ft. contour, but coverage was sparse in most areas and not problematic. Coverage of emergent vegetation was approximately 364 acres (18.9%). Light coverage of emergent vegetation was found in approximately 130 acres, moderate coverage in 111 acres and severe coverage was found in 123 acres. Approximately 480 acres (25%) of the lake has light coverage of submersed vegetation.

#### Aquatic Vegetation Surveys and Type Maps:

Vegetation type map surveys were conducted annually by the Aquatic Plant Control Section from 1980-1984, then 1988-1995, and 1998-2001. Inland Fisheries Section personnel conducted surveys in 2009, 2014, and 2015. See [Appendix IV](#).

#### Aquatic Vegetation Treatment History:

Herbicide applications for control of noxious aquatic vegetation in Kepler Lake have been ongoing for a number of years. Figures for acres of vegetation treated prior to 2005 are not available. Table 2 below lists herbicide applications from 2005 to 2015.

Table 2. – Herbicide Applications in Kepler Lake from 2005 to 2015.

Treatment Year	Primary Plant Species	Herbicides Used	Acres Treated
2005	American lotus, watershield, spadderdock	2,4-D (0.5 gal/acre)	28
2009	American lotus, water lily, smartweed, giant	2,4-D (0.5 gal/acre), AquaMaster (0.75 gal/acre), Diquat E	120

	salvinia, primrose	Pro 2L (1 gal/acre)	
2010	American lotus, water lily, watershield, duckweed	AquaMaster (0.75 gal/acre), Knockout (1 gal/acre)	126
2011	Giant salvinia	Tribune/Knockout (1 gal/acre), Clearcast (0.5 gal/acre)	22
2012	Giant salvinia, American lotus, water lily	AquaMaster (0.75 gal/acre), Tribune (1 gal/acre)	50
2013	Giant salvinia, American lotus, water lily	2,4-D (0.5 gal/acre), AquaMaster (0.75 gal/acre), Tribune (0.5 gal/acre)	31
2014	Giant salvinia	AquaMaster (0.75 gal/acre)	10
2015 (as of Nov. 1 <sup>st</sup> )	Giant salvinia, duckweed, torpedo grass, water lily	Round-Up Custom(0.75 gal/acre), Tribune(0.75 gal/acre)	21

## HISTORY OF REGULATIONS

### Recreational

Statewide regulations have been in effect for all species since impoundment.

The Louisiana recreational fishing regulations can be viewed at:

<http://www.wlf.louisiana.gov/regulations>

### Commercial

Statewide commercial fishing regulations apply on Kepler Lake and can be viewed at: <http://www.wlf.louisiana.gov/regulations>

## DRAWDOWN HISTORY

Kepler Lake has been drawn down for various reasons since it's impoundment in the late 1950's. Dates, elevation below pool and purpose of these drawdowns are reported in Table 3.

Table 3. Drawdown history of Kepler Lake, LA from 1959 to 2015.

<b>Year</b>	<b>Date(s)</b>	<b>Depth Below Pool</b>	<b>Purpose</b>
1959	9/18 – 1/25/1960	7 Feet	Work on dam and spillway; pool level raised 18 inches
1967	9/13 – 12/1	5 Feet	Requested by Bienville Parish Police Jury to “continue their program of water level drawdown”.
1969	7/9 – Completion	8 Feet	Work on Dam & Spillway
1974	Summer – unknown	Unknown	Unknown – lake drawn down by the KCRWCDC
1975	Unknown	Unknown	Unknown – lake drawn down by the KCRWCDC
1976	9/7/76 – 9/1/77	10 Feet	Recommended by LDWF, Unsure if occurred
1978	Fall '78 – 1/1/79	9 Feet	Vegetation Control
1980	8/1/80 – 1/1/81	9	Vegetation Control
1982	Post Labor Day 1982 – Unknown	Unknown	Likely vegetation control; gates opened prior to LDWF recommendation.
1986	Post Labor Day '86 – 1/1/87	6	Shoreline maintenance at the request of the Bienville Parish Police Jury
1990	Unknown month/1990-2/1991	Unknown	Replace wooden bridge at request of the Bienville Parish Police Jury
1994	9/19/94 – 1/15/95	8 Feet	Aquatic vegetation control and shoreline maintenance
1997	6/16/97 – 1/31/98	8 Feet	Shoreline maintenance at request of KCRWCDC
2003	9/2/03 – 1/27/04	8	Shoreline improvements & erosion control at request of KCRWCDC
2006	6/15/06 – 1/16/07	8	Shoreline maintenance and erosion control at request of KCRWCDC. Gates closed two weeks early due to downstream flooding.
2014	6/15/14-12/1/14	5-8 feet	Shoreline maintenance and erosion control at the request of the KCRWCDC. Lake was dewatered to 5 feet below pool stage until

			September 15, and then dewatered to 8 feet below pool until closing to address concerns over possible fish kills during summer months. Two-stage drawdown prescriptions will not be necessary in the future. After assessing the situation during the drawdown, the threat of fish kills is minimal due to the lack of organics on the lake bed and ample water remaining in the lake.
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### **FISH KILLS/ DISEASE HISTORY, LARGEMOUTH BASS VIRUS**

2001 – A small fish kill due to an electrical short from a power pole near the address of 302 Myrick Circle. The electrical short was confirmed and repaired by the power company.

2008 – On June 19, 2008, LDWF personnel investigated a fish kill involving approximately 200 fish including mostly bluegill, warmouth, chain pickerel, and a few largemouth bass. The kill was located in the dense vegetation above the bridge where Kepler Creek enters the lake. The investigation indicated that low dissolved oxygen may have been the problem as the daily air temperatures were extremely high and atmospheric conditions were cloudy. The dissolved oxygen level was found to be below 3.0 mg/L.

No fish kills have occurred where Largemouth Bass Virus is suspected to be a factor. Sampling for Largemouth Bass Virus has not been conducted on Kepler Lake.

### **CONTAMINANTS/POLLUTION**

A Fish Consumption Advisory was issued for Kepler Lake on 5/29/03. The advisory indicates unacceptable levels of mercury in bowfin. See [Appendix V](#) for complete details of the advisory.

### **BIOLOGICAL**

#### Fish Sampling History:

The Louisiana Department of Wildlife and Fisheries has conducted fisheries sampling on Kepler Lake from shortly after impoundment up until present time. A complete record of sampling history is found in Table 4.

Table 4. Summary of historical, current and scheduled fish samples taken on Kepler Lake, Louisiana from 1961 to 2018.

<b>KEPLER LAKE FISH SAMPLING HISTORY</b>	
<b>YEAR</b>	<b>GEAR</b>
1961	3 – One Acre Rotenone Sets
1962	3 – One Acre Rotenone Sets
1963	3 – One Acre Rotenone Sets
1964	3 – One Acre Rotenone Sets
1969	3 – One Acre Rotenone Sets
1974	2 – One Acre Rotenone Sets
1976	2 – One Acre Rotenone Sets
1977	2 – One Acre Rotenone Sets
1985	2 – One Acre Rotenone Sets
1986	3 – One Acre Rotenone Sets
1991	2 – One Acre Rotenone Sets Electrofishing – 37 minutes of sampling – Spring Electrofishing – 54 minutes of sampling – Fall 13 minute Electrofishing Forage Sample - Fall
1992	Electrofishing – 35 minutes of sampling – Spring
1996	Electrofishing – 73 minutes of sampling – Spring
1998	Electrofishing 2 – 15 minute samples - Spring
2001	Electrofishing 4 – 15 minute samples – Spring 3 – 25' Seine, ¼ inch bar, 1 Quadrant Sets
2004	Electrofishing 4 – 15 minute samples - Spring
2006	Electrofishing 4 – 15 minute samples - Spring
2007	Electrofishing 4 – 15 minute samples – Spring 3 – 25' Seine, ¼ inch bar, 1 Quadrant Sets
2009	Electrofishing 4 – 15 minute samples – Spring Electrofishing 5 – 15 minute samples – Fall / Included 1 Forage Sample
2010	Lead Nets – 3 Stations
2014	Electrofishing 4 – 15 minute samples – Spring
2016	No sampling planned
2017	Electrofishing 4 – 15 minute samples – Spring Electrofishing 4 – 15 minute samples – Fall 4 – 225 Sec. electrofishing forage samples - Fall Largemouth bass genetic sampling--Fall
2018	No sampling planned

Lake Records:

There are no records kept specifically for Kepler Lake by the Louisiana Outdoor Writers Association (LOWA). Kepler Lake is not listed as the location for any Top 10 record fish species maintained by LOWA. For more information on state records, visit:

**Stocking History:**

Fish for stocking in Kepler Lake have been provided by LDWF and purchased on several occasions by the KCRWCDC. Channel catfish, blue catfish, Florida largemouth bass, bluegill, black crappie, threadfin shad and triploid grass carp have been stocked in Kepler Lake over the period from 1985 through 2015. Table 5 lists the fish stocked in Kepler Lake.

Table 5. The stocking history of Kepler Lake, Louisiana from 1985 to 2015.

<b>Date</b>	<b>Number / Species stocked</b>
1985	35,100 Blue catfish fingerlings
1998	30,000 Channel catfish fingerlings 50,000 Threadfin shad 1,000 Florida hybrid bass All fish stocked in 1998 purchased by the KCRWCDC
1999	8,058 Channel catfish fingerlings
2000	18,000 Channel catfish fingerlings
2002	21,480 Channel catfish fingerlings
2003	19,452 Florida largemouth bass fingerlings
2004	20,002 Channel catfish fingerlings 13,678 Florida largemouth bass fingerlings 3,140 Bluegill fingerlings
2005	20,033 Channel catfish fingerlings 21,465 Florida largemouth bass fingerlings
2007	19,980 Channel catfish fingerlings 16,013 Florida largemouth bass fingerlings
2008	20,644 Florida largemouth bass fingerlings
2009	14,514 Channel catfish fingerlings 25,852 Florida largemouth bass fingerlings 30,000 Threadfin shad – purchased by KCRWCDC 2,000 triploid grass carp (8” – 10” fingerlings) – purchased by KCRWCDC
2010	13,640 Florida largemouth bass fingerlings 20,000 Black crappie fingerlings
2011	11,935 Florida largemouth bass fingerlings 20,125 Channel catfish fingerlings
2013	1,500 triploid grass carp adults

Species Profile:

A list of native and introduced species of fish can be found in Table 6 below.

Table 6. List of indigenous freshwater fishes found in Kepler Lake through LDWF standardized sampling efforts.

Gar Family, LEPISOSTEIDAE

Spotted gar, *Lepisosteus oculatus* (Winchell)

Bowfin Family, AMIIDAE

Bowfin, *Amia calva* Linnaeus

Shad Family, Clupeidae

Gizzard Shad, *Dorosoma cepedianum* (Lesueur)

Minnow Family, CYPRINIDAE

Golden shiner, *Notemigonus crysoleucas* (Mitchill)

Sucker Family, CATOSTOMIDAE

Lake chubsucker, *Erimyzon sucetta* (Lacépède)

Spotted sucker, *Minytrema melanops* (Rafinesque)

Freshwater Catfish Family, ICTALURIDAE

Black bullhead, *Ameiurus melas* (Rafinesque)

Yellow bullhead, *Ameiurus natalis* (Lesueur)

Channel catfish, *Ictalurus punctatus* (Rafinesque)

Tadpole madtom, *Noturus gyrinus* (Mitchill)

Flathead catfish, *Pylodictis olivaris* (Rafinesque)

Pike Family, ESOCIDAE

Chain pickerel, *Esox niger* Lesueur

Pirate Perch Family, APHREDODERIDAE

Pirate perch, *Aphredoderus sayanus* (Gilliams)

Killifish Family, CYPRINODONTIDAE

Blackstripe topminnow, *Fundulus notatus* (Rafinesque)

Livebearer Family, POECILIIDAE

Western mosquitofish, *Gambusia affinis* (Baird and Girard)

Silverside Family, ATHERINIDAE

Brook silverside, *Labidesthes sicculus* (Cope)

Temperate Bass Family, PERCICHTHYIDAE



Yellow bass, *Morone mississippiensis* Jordan and Eigenmann

Sunfish Family, CENTRARCHIDAE

Flier, *Centrarchus macropterus* (Lacépède)  
Green sunfish, *Lepomis cyanellus* Rafinesque  
Warmouth, *Lepomis gulosus* (Cuvier)  
Bluegill, *Lepomis macrochirus* (Rafinesque)  
Longear sunfish, *Lepomis megalotis* (Rafinesque)  
Redear sunfish, *Lepomis microlophus* (Günther)  
Spotted sunfish, *Lepomis miniatus* (Valenciennes)  
Northern largemouth bass, *Micropterus salmoides* (Lacépède)  
Spotted bass, *Micropterus punctulatus* (Rafinesque)  
Black crappie, *Pomoxis nigromaculatus* (Lesueur)

Species introduced through stocking efforts:

Blue catfish, *Ictalurus furcatus* (Lesueur)  
Threadfin shad, *Dorosoma petenense* (Günther)  
Grass carp (certified triploid), *Ctenopharyngodon idella* (Valenciennes)

It is not certain whether the efforts to introduce these species were successful as these species have not been encountered during fisheries sampling efforts. Threadfin shad are the only one of the introduced species likely to reproduce in the lake and no reproduction has been documented.

Largemouth bass genetics:

Genetic analysis of Kepler Lake largemouth bass has been conducted on two occasions to determine the presence or absence of the Florida genome (Table 7.) The genome was not detected in the population in 2004, however, eight percent of sample of 39 bass (3 fish) in 2009 were found to be hybrid offspring from previous Florida bass stocking efforts

Table 7. – Largemouth Bass Genetic Analysis from Kepler Lake, LA, 2004 and 2009.

Year	Number	Northern %	Florida %	Hybrid %
2004	56	100	0	0
2009	39	92	0	8

Threatened/Endangered/Exotic Species:

No threatened or endangered fish species are known to inhabit Kepler Lake.

**CREEL**

No creel surveys have been conducted on Kepler Lake.

**HYDROLOGICAL CHANGES**

The pool level was raised 1.5 feet in 1959 increasing the surface area from 1841 acres to the current area of 1925 acres.

**WATER USE**

Fishing, waterfowl hunting, swimming, boating, some water sports (limited due to excessive timber/snags).

**HUNTING**

Waterfowl hunting is locally popular on Kepler Lake. An annual permit from the KCRWCDC is required for each blind. The blinds must be located a minimum of 300 yards from other blinds or inhabited shorelines.

**APPENDIX I – KCRWCDC - Enabling Legislation**  
([return to authorization](#))

**RS 38:3087.31 – 38:3087.47**

**PART XVII. KEPLER CREEK RECREATION AND WATER  
CONSERVATION DISTRICT**

**§3087.31. Creation**

There is hereby created a recreation and water conservation district to be known as the "Kepler Creek Recreation and Water Conservation District".  
Acts 1995, No. 443, §1, eff. June 17, 1995.

**§3087.32. Location**

The district shall be comprised of the territory within Voting District Six of Bienville Parish as such district was established on June 17, 1995.  
Acts 1995, No. 443, §1, eff. June 17, 1995.

**§3087.33. District as political subdivision and body corporate; purpose and powers**

A. The district so created shall be a political subdivision of the state of Louisiana which shall have for its purpose the preservation, promotion, and development of the wealth and natural resources of the district by the conservation of the soil and water of Kepler Creek for agricultural, recreational, commercial, and sanitary purposes and by the regulation of aquatic plant growth.

B. It shall constitute a body corporate in law with all powers, rights, privileges, and immunities of a corporation. It shall have the power to sue and be sued, to buy and sell, to levy taxes, to negotiate and execute contracts, and to incur debts and issue negotiable bonds in payment thereof under and in accordance with existing law. It shall have the authority to acquire by purchase, donation, or otherwise every type and specie of property, including servitudes and rights of use necessary to its purpose, and to lease, build, operate, and maintain any works or machinery designed to accomplish the purposes of the district.

C. It shall have complete control over the supply of fresh water of Kepler Creek which shall be administered for the benefit of the persons residing or owning property within the district, and if it should be for the benefit of the district it shall have the authority to sell such water for irrigation, municipal, and industrial uses both within and outside the district. However, the district shall have no authority to regulate or control any use by any municipality, district, or other person of such water supply which use was being made by such municipality, district, or other person on June 17, 1995, including no authority to charge or collect any fee or charge therefor.

D. The district shall be deemed to be designed to carry out an essential governmental function, and all of the property of the district shall be exempt from state and local sales and use taxation. It shall have the authority to cooperate and contract with the government of the United States or any department or agency

thereof and to accept grants and donations of property and money therefrom. It shall have the authority to cooperate with the state of Louisiana or any political subdivision, department, agency, or corporation of the state for the management of the waters of Kepler Creek and the construction, operation, and maintenance of facilities designed to accomplish the purpose for which the district is created on any basis including the matching of funds and by participating in projects authorized by any federal or state law as it shall see fit.

Acts 1995, No. 443, §1, eff. June 17, 1995.

§3087.34. Board of commissioners, appointment; tenure; vacancies; compensation

A. The district shall be governed and controlled by a board of five commissioners, each of whom shall be a qualified elector of the state of Louisiana, owning property within the district. Each of the five commissioners shall reside in Bienville Parish.

B. The initial members of the board of commissioners shall be appointed by the Bienville Parish Police Jury. The initial members of the board shall serve as follows: two commissioners shall serve a two-year term and three commissioners shall serve a four-year term. Commissioners shall draw lots for their initial terms at the first commission meeting. Thereafter, all commissioners shall serve four-year terms. After the initial appointments, upon expiration of a term of a member of the board of commissioners, the police jury shall appoint a successor from a list of two names submitted by the board of commissioners. A commissioner may not serve more than two consecutive terms of any length, even if one term is shorter than four years. Any vacancy in the office of commissioner due to death, resignation, or any other cause, other than expiration of a term of office, shall be filled by the president of the board with majority approval of the board for the remainder of the unexpired term.

C. Members of the board of commissioners shall receive no compensation for their services.

Acts 1995, No. 443, §1, eff. June 17, 1995.

§3087.35. Oaths

Before entering upon his official duties each member of the board of commissioners shall take the oath of office provided by Article X, Section 30 of the Constitution of Louisiana before an officer authorized by law to administer oaths.

Acts 1995, No. 443, §1, eff. June 17, 1995.

§3087.36. Election of officers

Immediately after the members of the board of commissioners have been appointed, or as soon as thereafter is practicable, they shall meet and organize by electing from their number a president, vice president, and secretary who shall perform the duties normally required of such officers.

Acts 1995, No. 443, §1, eff. June 17, 1995.

§3087.37. Powers of the board

A. In order to accomplish the purposes for which the district is created, the board of commissioners may:

(1) Purchase, acquire by donation, hold, sell, and convey immovable and movable property and execute such contracts as it may deem necessary or convenient to enable it to properly carry out the purposes for which it is created.

(2) Acquire servitudes and rights of use by purchase, by donation, and by assignment for the district or otherwise.

(3) Assist in conserving soil and water and in developing the water resources of the district, provided nothing shall be done to interfere with districts or municipalities previously organized under Louisiana law.

(4) Cooperate with the state Department of Transportation and Development and other state agencies in the maintenance or improvement and the construction of any works or improvements for the control, retention, diversion, or utilization of water; retard runoff of water and soil erosion; construct any ditch, channel improvement, dike, dam, or levee, and repair, improve, and maintain any of said improvements or structures.

(5) Manage and control the water level and growth of aquatic plants in the creek.

(6) Employ and hire secretarial, clerical, and other such personnel as may be necessary in the operation of the business of the district and fix their compensation; employ engineers, attorneys, and other professional personnel as necessary and fix their compensation.

(7) Levy taxes, issue bonds, and incur indebtedness within the limitations prescribed by the constitution and laws of Louisiana, and in the manner prescribed thereby.

(8) Cooperate and contract with persons, firms, associations, partnerships, private corporations, cities of this state, or other public corporations, and with any other local, state, and governmental agencies for the sale or use of any waters impounded by the district.

(9) Grant franchises to telephone, telegraph, cable, and electric power companies and grant franchises for the purposes of laying gas, sewer, electricity, or other utilities to supply the inhabitants or any person or corporation with gas, water, sewerage, and electricity, when such construction is within the district. Nothing contained in this Part shall affect the vested rights of any corporation which pursuant to R.S. 45:781(A), has constructed, and maintains and operates telegraph, telephone, and other lines for the transmission of intelligence prior to June 17, 1995.

(10) Appoint, hire, designate, and empower wardens, rangers, patrols, and such other personnel as may be deemed necessary by the commission for the

enforcement of such regulations as may be promulgated and adopted by said commission.

(11) Do and perform any and all things necessary or incidental to the fulfillment of the purposes for which the district is created.

B. The Kepler Creek Recreation and Water Conservation District shall have, with respect to the improvements and maintenance of the district, the advice of the Department of Transportation and Development, and it shall request from time to time the assistance of the department to make such surveys, inspections, and investigations, render such reports, estimates, and recommendations, and furnish such plans and specifications as the board of commissioners of said district may request.

C. The district is hereby authorized to incur debt for any one or more of its lawful purposes, to issue in its name negotiable bonds or certificates of indebtedness evidencing such debt, and to provide for the security and payment thereof as follows:

(1) To issue certificates of indebtedness maturing within one year from date of issuance to evidence money borrowed in anticipation of current revenues for the administration, operation, construction, and maintenance costs and expenses of the district, which certificates shall be payable in principal and interest from any available income, revenues, fees, or taxes pledged to their payment by the district.

(2) To issue bonds substantially in the manner set forth in Article VI of the Constitution of Louisiana, and other authority supplemental thereto, particularly Part III of Chapter 4 of Subtitle II of Title 39 of the Louisiana Revised Statutes of 1950. Such bonds shall be payable from an ad valorem tax on all taxable property in the district sufficient to pay such bonds in principal and interest, when approved by vote of a majority in number of the qualified electors voting on the proposition at an election held for that purpose. Such bonds shall be issued in the manner provided by the law pursuant to which they are being issued and the maximum interest rate for the bonds shall be that prescribed by such law. The bonds shall be issued in such amount or amounts as the board of commissioners shall determine. However, the principal amount of all such bonds outstanding as of the date of the issuance of any new bonds shall never exceed ten percent of the assessed valuation of the taxable property within the district, to be ascertained by the last assessment roll of record in Bienville Parish.

(3) The district shall have additional authority to levy taxes under the provisions of Article VI, Section 32 of the Constitution of Louisiana, for the purpose of improving, operating, and maintaining its facilities, provided any such tax shall first be approved at an election held for said purpose in accordance with the Louisiana Election Code.

(4) The copy of any resolution levying a tax, certified by the secretary of the board of commissioners of said district, shall be transmitted to the tax assessor of Bienville Parish on or before the first of the year in which the tax is to be

assessed and collected, and it shall be the duty of the assessor to assess the tax and extend the same upon the tax rolls of the parish. The tax shall be collected by the sheriff and ex officio tax collector of Bienville Parish in the same manner as taxes levied by the parish. Taxes assessed shall constitute the same liens upon the property assessed, shall bear the same penalties, and collection thereof shall be enforced in the same manner and at the same time as parish taxes.

Acts 1995, No. 443, §1, eff. June 17, 1995.

#### §3087.38. Parcel fee

A.(1) The Kepler Creek Recreation and Water Conservation District may levy and collect a parcel fee within its boundaries which shall not exceed one hundred dollars per parcel per year, which parcel fee shall be imposed by resolution or ordinance of the board of commissioners of the district only after the question of the imposition of the parcel fee and the purpose, rate, and duration of such fee has been approved by a majority of the qualified electors of the district voting at an election held therein. The proceeds from the levy of said parcel fee shall be expended for costs of operation of the district, including management and control of water levels and aquatic plant growth within the district and protection and preservation of the works, improvements, and properties owned or controlled by the district, prescribing the manner of their use by public corporations and persons, and preserving order within and adjacent thereto. Any parcel fee imposed pursuant to this Section shall be levied and collected and be due and owing annually. Such fee may be carried on the tax rolls for Bienville Parish and collected at the same time as parish ad valorem taxes.

(2) If any parcel fee is not paid when due, the district shall proceed against the parcel for collection of the amount of the fee unpaid and delinquent, any collection costs incurred by the district plus interest at a rate not exceeding twelve percent on the unpaid amount of the parcel fee, and in the event legal proceedings are necessary to effect collection, court costs, and reasonable attorney fees. However, attorney fees shall be payable by the parcel owner only if demand by the board of commissioners has been made on said owner by certified mail, and such parcel owner has failed to pay the amount due within ten days after such demand.

(3) A judgment obtained for nonpayment of a parcel fee, upon being recorded in the mortgage records of Bienville Parish, shall prime all other liens except those for taxes and prior recorded local or special assessments. If there are one or more property mortgages on such parcel and the mortgage holder or holders have notified the tax collector in the parish of such recorded mortgage in accordance with the requirements of R.S. 47:2180.1, the district, prior to proceeding against such parcel for failure to pay a parcel fee, shall give notice to each mortgagee of the amount of the parcel fee due and owing on such parcel and that such fee must be paid within twenty days after mailing the notice or proceedings will be commenced against the parcel. The notice shall be sent to

each such mortgage holder by certified mail, return receipt requested, or by personal or domiciliary service on such mortgage holder.

B. (1) The district may incur debt and issue bonds payable from an irrevocable pledge and dedication of all or a portion of the proceeds of the parcel fee, provided that the question of funding said proceeds into bonds shall have been approved by a majority vote of the qualified electors of the district voting at an election held therein and the State Bond Commission has approved the issuance of the bonds. The question or proposition with respect to the funding of the proceeds of the parcel fee may be submitted at a separate election held for that purpose. The maturities of the bonds shall be so arranged that the total amount of principal, and interest falling due in such year on all bonds theretofore issued payable from such parcel fee, shall not exceed eighty percent of the estimated proceeds to be received from the levy of such parcel fee in the calendar year in which the bonds are issued.

(2) The bonds may be sold at public or private sale and shall be issued pursuant to the provisions of a resolution adopted by the board of commissioners of the district, provided the bonds shall mature over a period not to exceed the period for which the parcel fee, the proceeds of which are to be used to pay principal and interest on the bonds, is authorized. The bonds and the income therefrom shall be exempt from taxation by the state and by any parish, municipality, or political subdivision thereof.

C. The district may incur debt and issue certificates of indebtedness pursuant to the provisions of R.S. 33:2921 through 2925, subject to the approval of the State Bond Commission.

D. A "parcel" as used in this Section shall mean one or more lots, subdivided portions of ground, or individual tracts identified by an individual assessment number on the assessment rolls of Bienville Parish. A partial owner of a parcel shall be responsible for that proportion of the parcel fee equal to the proportion of the value of the entire parcel assigned to the partial owner on the assessment roll.

E. The district may create different classes of real estate and present to the voters a proposition to levy or impose different parcel fees for each class.

Acts 1995, No. 443, §1, eff. June 17, 1995.

#### §3087.39. Rules and regulations

In order to accomplish the purposes of the district to manage and control water levels and the growth of aquatic plants and to protect the works, improvements, and property of the district, both immovable and movable, to secure the best results from the construction, operation, and maintenance thereof, and to prevent damage to the district by misuse of any works, improvements, or properties or by the pollution by solid or liquid substance or misuse of the waters of the district or any watercourse therein, the board of commissioners may make and enforce such rules and regulations as it shall deem necessary and advisable:



(1) To manage and control the water level and the growth of aquatic plants in the creek.

(2) To protect and preserve the works, improvements, and properties owned or controlled by the district, prescribe the manner of their use by public corporations and persons, and preserve order within and adjacent thereto.

(3) To prescribe the manner of building bridges, piers, boathouses, seawalls, roads, and fences, including fences for the control of livestock or other works in, along, or across any channel or extending into the creek.

(4) To prescribe the manner in which natural or artificial drains, ditches, sewers, pipelines, or other works shall be adjusted to or connected with the works of the district or any watercourse therein and the manner in which the watercourses of the district may be used for sewer outlets for disposal of waste.

(5) To prescribe the permissible uses of the water supply provided by the creek and to prevent the pollution or unnecessary waste of such water supply.

(6) To prescribe or regulate the discharge into sewers of the district of any liquid or solid waste deemed detrimental to the works and improvements of the district.

(7) To establish rules and regulations and cause them to be enforced with regard to activities engaged in upon Kepler Creek which is not regulated by the Louisiana Wildlife and Fisheries Commission.

Acts 1995, No. 443, §1, eff. June 17, 1995.

§3087.40. Construction which would impede flow of water in creek prohibited; pollution defined and prohibited; penalties fixed for violations

A.(1) No person or public corporation shall erect within the drainage area of the district any dam or reservoir upon any stream or watercourse which will affect the creek until a copy of the plans thereof has been filed with the board of commissioners and approved.

(2) Whoever violates this Subsection shall be fined not less than five hundred dollars nor more than one thousand dollars or imprisoned for not more than sixty days, or both.

B.(1) No person shall knowingly and willfully empty or drain or permit to be drained from any pump, reservoir, well, or oil field, into any stream or drain constituting the watershed of the creek, or from any stream within said district into said creek any oil, salt water, or other noxious, toxic, hazardous, or poisonous gas, liquid, or substance which would render the water unfit for irrigation purposes or for human consumption through "water districts" or would destroy aquatic and fish life in the creek.

(2) Each and every day that oil, salt water, or any other substance described in Paragraph (1) of this Subsection is permitted to flow into natural streams or drains which constitute the watershed of the creek shall constitute a separate and distinct offense.

(3) Whoever violates this Subsection shall be fined not less than one hundred dollars nor more than one thousand dollars or imprisoned for not more than three months, or both.

C. (1) No person shall:

(a) Obstruct drainage channels which compose any drain or stream flowing into the creek by bridging them except in accordance with plans, specifications, and instructions prescribed by the board of commissioners of the district.

(b) Construct dams, locks, or gates in drainage channels of the watershed of the creek or into the creek itself without permission of the commission.

(c) Anchor rafts, crafts, fish traps, fish cars, and other obstacles in the channel of any stream, drain, or natural flow of the feeder streams of the watershed of the creek or the creek itself.

(d) Float timber in the watershed of the creek.

(2) Whoever violates this Subsection shall be fined not less than five hundred dollars nor more than one thousand dollars or imprisoned for not more than sixty days, or both.

D. (1) No proprietor, owner, lessee, or possessor of land abutting upon the creek or upon any public road paralleling the water line or contiguous to the creek shall in any manner close or place any obstruction in any drain or ditch, whether on private property or on the public road or levee adjacent to the road, which will in any manner interfere with the effective, thorough, and continuous drainage into the creek.

(2) Whoever violates this Subsection shall be fined not less than five hundred dollars nor more than one thousand dollars or imprisoned for more than sixty days, or both.

Acts 1995, No. 443, §1, eff. June 17, 1995.

#### §3087.41. Supervision by Department of Transportation and Development

All of the powers and duties relative to construction and letting of contracts for construction required to be advertised by R.S. 38:2211 and 2212 conferred upon the district shall be subject to and exercised under the supervisory control of the Department of Transportation and Development of the state of Louisiana, which department shall furnish to the district such engineering services as it shall require and may cooperate with the district in the construction of any work or facility considered necessary by the district and said department to the purposes of the district.

Acts 1995, No. 443, §1, eff. June 17, 1995.

#### §3087.42. Contracts let by board

Any and all contracts of the district shall be let by the board of commissioners under the provisions of the Public Bid Law, R.S. 38:2181 et seq.

Acts 1995, No. 443, §1, eff. June 17, 1995.

#### §3087.43. Mineral rights

Whenever it shall become necessary for the district or the Department of Transportation and Development to acquire full ownership of any land for the purpose of constructing any work or facility within the district, the owner thereof in his own behalf or in behalf of his assigns in the event of a prior assignment may retain the mineral rights to such property together with the right to grant mineral leases and servitudes thereon. No form of prescription shall divest such owner or his assigns of these rights so long as the district or a department or agency of the state retains the ownership of the property, but should ownership pass into private hands, the prescription of nonuse provided by R.S. 31:27 shall apply as in the usual case.

Acts 1995, No. 443, §1, eff. June 17, 1995.

#### §3087.44. Tax exemption; mineral leases unabridged

Should the district or the Department of Transportation and Development acquire a servitude, right of use, or title in full ownership to immovable property or any other property, such property shall not be subject to any ad valorem tax or tax of any nature by the state of Louisiana or any political subdivision thereof so long as such property is used for the purpose of the district. The provisions of this Part shall in no way abridge the right of any individual, person, firm, or corporation from whom a servitude or right of use may have been acquired to lease the land subject thereto for the production of oil, gas, or other minerals and to produce or cause to be produced oil, gas, or other minerals from such property so long as said leases are subject to the terms and conditions of the servitude executed in favor of the commission.

Acts 1995, No. 443, §1, eff. June 17, 1995.

#### §3087.45. Playgrounds, parks, and other facilities

The board of commissioners shall have the power to cause to be created and constructed playgrounds, picnic grounds, grounds for recreation, parks, and any and all other facilities to accommodate the public and to provide adequate access to the creek, as may within the opinion of the board become necessary.

Acts 1995, No. 443, §1, eff. June 17, 1995.

#### §3087.46. Regulation of commercial establishments

A. The board of commissioners shall have authority:

(1) To establish and cause to be enforced rules and regulations pertaining to all commercial establishments which may be constructed for the purpose of commercializing and making commercial use of the creek or its facilities.

(2) To license and permit such establishments and to levy and collect a fee, to be fixed by the commission, for the privilege of making commercial use of the facilities of the creek.

B. The rules and regulations established and promulgated by the board of commissioners pursuant to this Section shall provide penalties for any commercial establishment operating without a permit or license.

Acts 1995, No. 443, §1, eff. June 17, 1995.

§3087.47. Audit

The district shall be audited pursuant to R.S. 24:513.

Acts 1995, No. 443, §1, eff. June 17, 1995.

**APPENDIX II - Kepler Public Boat Ramps**  
([return to access](#))



## APPENDIX III – Original Management Plan

[\(return to plan\)](#)

Prepared by: Lloyd E. Posey, Jr.

### PROPOSED MANAGEMENT PLAN FOR KEPLER LAKE, BIENVILLE PARISH, LOUISIANA

Prepared for the Kepler Lake Game and Fish Commission by the Fish and Game Division, Louisiana Wild Life and Fisheries Commission.

#### INTRODUCTION

Kepler Lake is an impoundment of approximately 2,000 acres located in Bienville Parish near the old community of Sparta. Its watershed is sandy and light clay soil. Springs are abundant and the water is noted for its purity and lack of dissolved minerals. Consequently the watershed is considered to be rather low in basic fertility.

The lake was created in 1957 by damming Kepler Creek. Originally the surface area was 1,841 acres. The level was raised eighteen inches in 1959 increasing the size to approximately 2,000 acres. The present elevation at Spillway level is 176.5 feet mean sea level.

The lake site possessed dense vegetative cover prior to impoundment. The timber was mixed pine and hardwood. Some of the marketable timber was sold by land owners prior to inundation. Rodden Timber Company reports 43.4% of the timber sold from their property was pine. A partial listing of trees frequently found in the lake site follows: loblolly pine (Pinus taeda), white oak (Quercus alba), cherrybark oak (Quercus pagoda), water oak (Quercus nigra), willow oak (Quercus phellos), magnolia (Magnolia grandiflora), whitebay (Magnolia virginiana), beech (Fagus grandiflora), cypress (Taxodium distichum), sweetgum (Liquidambar styraciflua), black gum (Nyssa sylvatica), common buttonbush (Cephalanthus occidentalis).

No attempt was made to remove the brush and timber of little or no market value. This has proved to be a regrettable oversight. After

flooding only water tolerant species survived. The dead trees and brush constitute a major problem now. Many of the trees are breaking off and falling. This, along with the vast amount of stumps, brush, and increasingly abundant aquatic plants, has rendered most of the lake extremely difficult to negotiate by boat and has provided an undesirable amount of cover for forage fish.

The only cleared areas are two boat roads, some fields that were in cultivation or pasture, and a small area near the dam. Clearings probably constitute less than 10% of the total lake area.

The clear, relatively infertile water found in Kepler Lake has been ideal for the prolific growth of aquatic vegetation, both submerged and emergent. A survey of the type and density of aquatic plants was conducted by Davis and Lapham in 1962. They reported the following: pondweeds (Potamogeton spp.), at least four species present, parrot feather (Myriophyllum spp.) at least two species present, bladderwort (Utricularia spp.), at least two species present, watershield (Brasenia schreberi), white water lily (Nymphaea odorata), localized.

These plants have increased in occurrence to the point that they interfere with navigation and fishing. Chemicals that will control these plants (with the exception of the white water lily) and not harm fish and other aquatic life have not been developed or they are so costly as to prohibit field applications.

Although Kepler Lake does not support a high poundage of fish per acre (43 lbs in 1961, 48 lbs in 1962) fishing success has been fairly good. A large percentage of the population is composed of game fish of available size. This probably is a result of extensive stocking of bass, crappie and bluegills by the fisheries section shortly after the lake was flooded. Another factor that might have contributed to the

favorable available game fish percentage is the lack of phytoplankton feeding fish such as gizzard shad. The absence of shad (theoretically at least) should increase predation on the small panfish and other forage fish thereby keeping their numbers within the limitations imposed by the available food supply. Those fishermen with a thorough knowledge of the lake and who fish it frequently have the highest success ratio. The clarity of the water requires caution on the part of the fishermen, as the fish are easily frightened. Best period of angling success is early or late. Some fishermen have resorted to using spinning gear in order to catch bluegills. This allows them to remain some distance from the area being fished and thereby avoid "spooking" the fish.

Kepler Lake supports a high wood duck population considering its size. A trapping and banding program has been carried on for four years and will be completed in 1963. Almost 500 wood ducks were banded in 1962.



## RECOMMENDATIONS

### I Clearing and Snagging

It would be highly desirable to remove some of the vast amount of limbs, brush, stumps and trees now present. These inconvenience the fishermen, are a safety hazard, and provide too much cover for forage fish. Any such undertaking will be expensive but the results prorated over a number of years should justify at least the clearing of the perimeter and a few areas in which heavy equipment could work if the water elevation is greatly reduced. To accomplish this clearing it would be necessary to drop the water level at least eight feet, possibly more. The level should be lowered approximately 4" per week starting on or around June 1 and continuing at this rate until the 8th day of July. This would remove approximately 20" of water yet not greatly interfere with the 4th of July weekend. On the 8th of July the level may be dropped at the rate of 3 or 4 inches per day until the desired level is reached. The final level would be best determined by the Department of Public Works considering their experience in clearing and construction.

It is not advisable to restrict fishing during the drawdown period. While this drawdown will be more drastic than normally recommended when using it as a fish management tool, it is not expected to have any major deleterious effect on the fish population. Population samples will be taken and if they should show a deficiency in game fish left for brood stock the lake will receive corrective stocking.

## II Water Level Fluctuation

An annual water level fluctuation program is recommended for Kepler Lake. Basically this constitutes dewatering or lowering the level of the impoundment a prescribed amount for a period of 3 or 4 months then reflooding. This is a multiple use management tool designed to improve fishing, help control obnoxious vegetation and improve waterfowl feeding conditions.

This practice has proven very beneficial in fish population management. Quite often the fish population of an impoundment tends to get "out of balance". This means the ratio between carnivorous and forage fish becomes upset and one group, usually the forage fish becomes dominant. This is especially true in a body of water that has extensive stands of aquatic vegetation or large areas of brush tops and trees. These aquatic jungles afford extensive hiding places for the forage species such as bluegill and minnows. The carnivorous fish such as largemouth bass cannot effectively prey on the forage species under these conditions. The forage fish reproduce at an alarming rate and soon have reached the point that they are too numerous for the available food supply. This results in "stunting". Large numbers of pan-fish are present but few of them reach a size that is desirable.

By lowering the water level to expose the large shallow areas these forage fish are driven from their hiding places and are concentrated in a smaller area. When this occurs the carnivorous fish can easily reduce the number of forage fish and thereby exert a favorable population control.

Timing is an important factor in a fluctuation program. If the level is lowered early in July the bass have had the opportunity to spawn and the young fingerlings are developing rapidly. At this time the bluegill spawning season is under way. Bluegills tend to spawn throughout the summer if conditions are favorable. Some spawning will have occurred by the first of July. The lowering water level will at this time interrupt the reproductive activities. This is no cause for alarm. When you remember that a single female bluegill can deposit around 30,000 eggs at one time it is evident that there is no danger of wiping them out.

When fish are feeding actively they are easier to catch. The fishing success should improve considerably. Large catches are likely to be common and this might alarm some people. It should be remembered that research has proved it impossible to catch all the fish in a body of water by legal means. While a portion of the total population will be removed by anglers there is no danger of decimating the population to the point that insufficient brood stock remains. The remaining fish will grow faster and their offspring will have a higher survival rate and growth rate than previously observed.

Another advantage of a fluctuation program is its effect on water fertility. The nutrients which are utilized by the aquatic plants before fluctuation will be released upon the decomposition of these plants and will be available indirectly to the fish population. Also the nutrients which have become bound on the bottom of the lake are oxidized when exposed and returned to a

usable form when reflooded. Fluctuation must be carried out annually for a number of years in order to derive the full benefits such a practice has to offer.

A fluctuation program is frequently used to help control obnoxious aquatic vegetation. It should be emphasized that this action will not eradicate the obnoxious vegetation. By drying and exposing the vegetation to the sun and air the mature plants will be killed and will decompose. The development of the plants would be delayed during the following growing season because it takes longer for mature plants to develop from seed or root stock than from dormant plants. It will furnish approximately six to nine weeks more fishing time the following spring than would be experienced without this practice.

The following are recommendations pertinent to fluctuating Kepler Lake.

- a. Begin lowering the level shortly after the 4th of July weekend at a rate of approximately 4 inches per day. From cross section profiles it appears that a drop of seven (7) feet below spillway level will be optimum. Hold the level at 169.5 feet mean sea level. This will take approximately twenty-one (21) days provided heavy rains do not occur.
- b. Close the gates and reflood after October 25 if waterfowl hunting is to be emphasized. It would be more desirable to wait until a later date to reflood from an aquatic weed control standpoint in order to take advantage of killing frosts. However, this might not allow sufficient

reflooding time for an early duck season.

c. Once initiated this program should be carried out annually.

### III Aquatic Vegetation Control

At present the control of obnoxious aquatic vegetation found in Kepler Lake other than by fluctuating the water level is not practical. Chemicals that will kill or control the problem plants in this lake are either non-existent or prohibitively high in cost. If an economical means of control is discovered it should be put to use.

### IV Waterfowl

While the level is down it would be desirable for the Kepler Lake Game and Fish Commission to plant certain duck foods on the exposed surfaces. Brown-top millet would be a good choice since it matures in approximately 45 days and is well liked by ducks. It can be broadcast into the water around the perimeter as the level recedes.

Native annual plants which occur as a result of the fluctuating water level will provide additional duck food. When these plants are gradually flooded by the rising water level in late fall a desirable feeding area is created, especially for dabbling ducks.

### V Public Access

The value of any body of water is greatly enhanced by easy access. It is suggested that public launching sites and picnic areas be constructed by the Kepler Lake Game and Fish Commission. These should have a concrete launching ramp and at least one acre of parking area each. Two public access sites, one on either side of the lake would be desirable.

## VI Commercial Fishing

Commercial fish at present are not abundant in Kepler. If they should become more numerous commercial fishing with legal gear should be encouraged. This will help remove fish that are competing with game fish for food and space and will furnish a source of income for a few people. It is doubtful that Kepler will ever produce the more desirable commercial fish such as buffalo, channel, blue, and flathead catfish in any great numbers.

Prepared by Lloyd E. Posey, Jr.  
Lake Management Project

## APPENDIX IV

[\(return to aquatic\)](#)

### Kepler Creek Reservoir Aquatic Vegetation Typemap Survey August 18, 2015

#### Introduction

Kepler Creek Reservoir in Bienville Parish was surveyed for aquatic vegetation on August 18, 2015. The survey was conducted by Inland Fisheries Biologist James Seales. The lake was approximately three inches below pool stage at the time of the survey. The water color was stained.

#### Vegetation Observed

##### Marginal Vegetation

Marginal aquatic vegetation was observed along significant areas of the shoreline of the lake. The predominant species was torpedo grass (*Panicum repens*), which covered large areas of the shoreline. Clumps of wild taro (*Colocasia esculenta*) were widely scattered around the shoreline. Bulrush (*Scirpus* spp.) and fiddleleaf (*Hydrolea* spp.) were also found in a few locations.

##### Emergent Vegetation

Fragrant water lily (*Nymphaea odorata*) was the prominent species of emergent vegetation found on Kepler Lake. The density of fragrant water lily ranged from widely scattered in some areas to dense coverage in areas of severe infestation. Creeping water primrose (*Ludwigia repens*), alligator weed (*Alternanthera philoxeroides*), pondweed (*Potamogeton* spp.), southern watergrass (*Luziola fluitans*), baby-tears (*Micranthemum umbrosum*) and American lotus (*Nelumbo lutea*) were found in a few locations on the lake. Most of the emergent vegetation was found in the back of the coves and on the upper end of the lake in water less than 3 ft. deep. A few patches of fragrant water lily were found in 5 to 6 ft. of water.

##### Submersed Vegetation

Submersed aquatic vegetation (SAV) was scattered in the shoreline areas out to 7 ft. deep. Coverage was sparse in most areas at the time of the survey. The major species were widgeon grass (*Ruppia maritima*) and bladderwort (*Utricularia* spp.). Slender spike rush (*Eleocharis baldwini*) was seen along the shoreline. Muskgrass (*Chara* spp.), naiad (*Najas* spp.), fanwort (*Cabomba caroliniana*), and variable-leaf milfoil (*Myriophyllum heterophyllum*) were observed in a couple of locations in the lake. The SAV was not topped out in any location visited and was found to be growing only 1 – 2 ft. or less up off of the lake bed in most areas. Approximately 25% of the lake had a light coverage of this mixture of submerged vegetation.

##### Floating Vegetation

Giant salvinia (*Salvinia molesta*) was found in a couple of areas on the lake, as was duckweed (*Lemna* spp.). Neither plant was problematic at the time of the survey, but giant salvinia has the potential to become a major problem on Kepler Lake.

### Summary

Kepler Creek Reservoir underwent a drawdown from June 15, 2014 through the end of November 2014. Vegetation coverage was greatly reduced following this drawdown. Currently the only area on the lake where vegetation is problematic is the extreme upper end of the lake. Currently, SAV is present out to the 7 ft. contour, but coverage is sparse in most areas and it is not problematic at this time. Currently coverage of emergent vegetation is approximately 364 acres (18.9%). Light coverage of emergent vegetation is found on approximately 130 acres, moderate coverage on 111 acres and severe coverage is found on 123 acres. Approximately 480 acres (25%) of the lake has light coverage of submersed vegetation.

### Vegetation Concerns

Giant salvinia was discovered on Kepler Creek Reservoir in 2009. Foliar herbicide applications have been ongoing as needed since the plant was discovered. The lake should be monitored for the presence of giant salvinia and additional herbicide applications made as necessary. Even though vegetation coverage was greatly reduced during the drawdown last year, significant levels of vegetation remain and will likely increase in coverage in future years. Two thousand triploid grass carp were stocked by the Kepler Creek Recreation and Water Conservation District Commission (KCRWCDC) in 2009 and an additional 1,500 by LDWF in 2013. The lake should be monitored to determine if additional grass carp are needed to control the submerged aquatic vegetation that has historically been problematic in Kepler Lake.

### SPECIES LIST

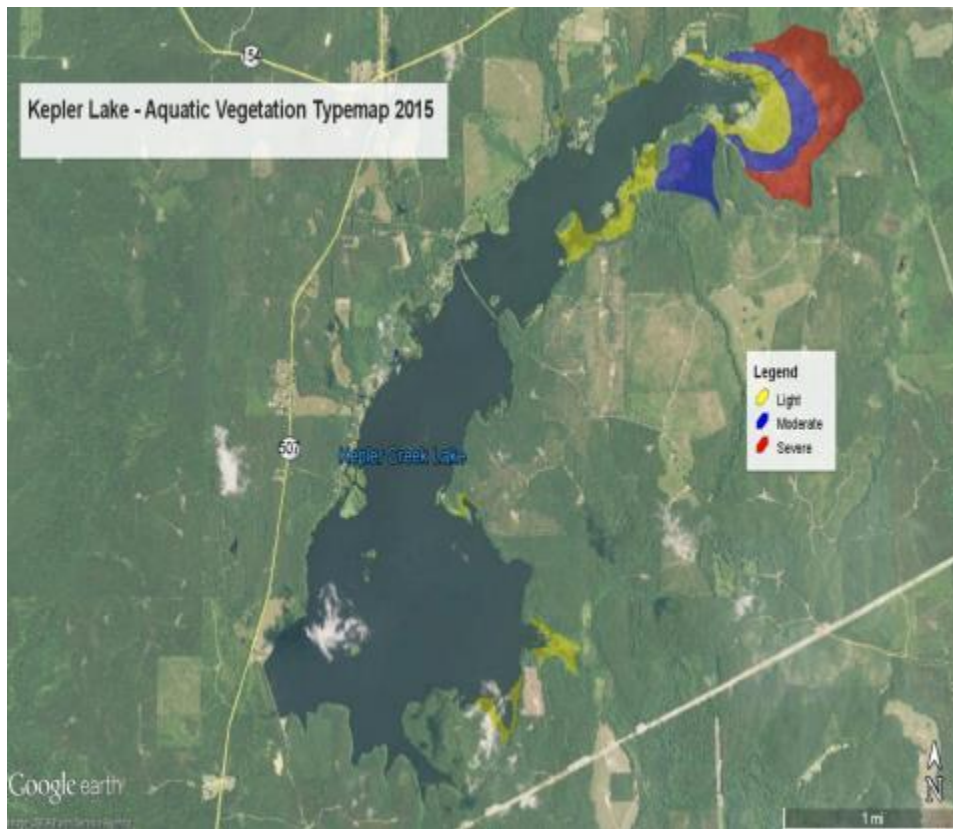
#### KEPLER CREEK RESERVOIR 2015

<u>Common Name</u>	<u>Scientific Name</u>
Alligator weed	<i>Alternanthera philoxeroides</i>
American lotus	<i>Nelumbo lutea</i>
Baby-tears	<i>Micranthemum umbrosum</i>
Bladderwort	<i>Utricularia</i> spp.
Bulrush	<i>Scirpus</i> spp.
Creeping Water Primrose	<i>Ludwigia repens</i>
Duckweed	<i>Lemna</i> spp.
Fanwort	<i>Cabomba caroliniana</i>
Fiddleleaf	<i>Hydrolea</i> spp.
Fragrant Water Lilly	<i>Nymphaea odorata</i>
Giant salvinia	<i>Salvinia molesta</i>
Muskgrass	<i>Chara</i> spp.
Naiad	<i>Najas</i> spp.
Pondweed	<i>Potamogeton</i> spp.



Slender Spike Rush  
Southern watergrass  
Torpedo Grass  
Variable-leaf milfoil  
Widgeon grass  
Wild Taro

*Eleocharis baldwinii*  
*Luziola fluitans*  
*Panicum repens*  
*Myriophyllum heterophyllum*  
*Ruppia maritima*  
*Colocasia esculenta*



## APPENDIX V – Fish Consumption Advisory

([return to contaminant](#))



M.J. "Mike" Foster, Jr.  
GOVERNOR

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James H. Jenkins, Jr.  
Secretary  
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*The following fish consumption advisory was issued on 05/29/03 by the Department of Health & Hospitals, the Department of Environmental Quality, and the Department of Wildlife & Fisheries. For more information, please contact:*

**DHH**  
Shannon Soileau  
(504) 568-8537

**DEQ**  
Chris Roberie  
(225) 765-0634

**DWF**  
Glenn Thomas  
(225) 765-2343

### FISH CONSUMPTION ADVISORY FOR KEPLER CREEK LAKE

In response to recent sampling and analysis of fish-mercury data, the Louisiana Department of Health & Hospitals (DHH), Department of Environmental Quality (DEQ), and Department of Wildlife & Fisheries (DWF) are issuing the following advisory for Kepler Creek Lake in Bienville parish where an unacceptable level of mercury has been detected in bowfin (choupique, grinnel). The advisory area includes Kepler Creek Lake only.

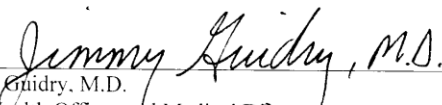
DHH, DEQ, and DWF advise that the following precautions be taken when eating fish taken from Kepler Creek Lake:

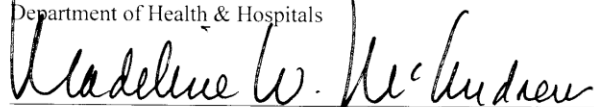
- **Women of childbearing age and children less than seven years of age SHOULD NOT CONSUME BOWFIN from the advisory area.**
- **Other adults and children seven years of age and older should consume no more than ONE MEAL PER MONTH of bowfin from the advisory area (a meal is considered to be half a pound of fish for adults and children).**
- **Unless the fish species is specifically addressed in the details of the advisory, please limit consumption of all species in an advisory area to 4 meals per month. Louisiana fish consumption advisories are based on the estimate that the average Louisiana resident eats 4 fish meals per month (1 meal = ½ pound). If you or your family members eat more than 4 meals of fish a month from local water bodies, you might increase your health risks. You can contact the Office of Public Health toll free at 1-888-293-7020 for more information about eating fish that contain chemicals.**

Mercury is an element that occurs naturally in the environment. It is released into the environment through natural processes and human activities. Consequently, there are small amounts of mercury in lakes, rivers, and oceans. Nearly all fish contain trace amounts of mercury. They absorb mercury from the water and sediment as they feed on aquatic organisms. Larger predator fish contain more mercury than smaller fish. Therefore, in general, it is recommended that smaller fish be consumed instead of larger ones.

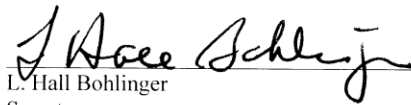
People are exposed throughout their lives to low levels of mercury. One way they can be exposed to mercury is from eating contaminated fish. Health effects from harmful levels of mercury can include nervous system and kidney damage. Developing fetuses are more sensitive to the toxic effects of mercury, especially in the first trimester of pregnancy. In addition to developing fetuses, infants and children are more sensitive to the effects of mercury; therefore, consumption advisories are issued at lower fish tissue concentration levels for these groups.

This advisory is issued as a precaution. Further sampling will be carried out by DEQ to determine the need for modifications to this advisory, including an adjustment of the boundaries if necessary. If you have consumed bowfin from these waters, it is not likely that there is an immediate need to be concerned about the effects of mercury. However, you should consult your personal doctor if you are concerned.

  
Jimmy Guidry, M.D.  
State Health Officer and Medical Director  
Department of Health & Hospitals

  
Madeline W. McAndrew  
Assistant Secretary, Office of Public Health  
Department of Health & Hospitals

  
David W. Hood  
Secretary  
Department of Health & Hospitals

A handwritten signature in black ink, appearing to read "L. Hall Bohlinger", written over a horizontal line.

L. Hall Bohlinger  
Secretary  
Department of Environmental Quality

A handwritten signature in black ink, appearing to read "James H. Jenkins, Jr.", written over a horizontal line.

James H. Jenkins, Jr.  
Secretary  
Department of Wildlife & Fisheries